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          Phippard, Deborah
          Vasanthakamur, Geetha
          Dotson, Stanton
          Ma, Xiao-Jun

<120>   Osteoarthritis tissue-derived nucleic acids, polypeptides,
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ccagcacccc attgacgggt acctctccca caccgagctg gctccactgc gtgctcccct  840

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gtgctaacat agatttaagt gaatacatta acggtgctaa aaatgaaaat ctaacccaa 1140
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cccaccaacc agaacgtggt ttgcctgagg ctgtaactga gagaaagatt ctggggctgt 1560

cttatgaaaa tatagacatt ctcacataag cccagttcat caccatttcc tcctttacct 1620

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<213>      Homo sapiens

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cctgacattc cttcctgtcc cttccttcca ggttctgtgg acaatcacaa tgggaatcca   240

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aagaagacat cctgagcagt gccagctttc ttctgttgat gccgttccct gaacatagga 2040

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<212>      DNA
<213>      Homo sapiens

<400>      13

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catgccaaat atgtgtctgt gactcaggat ccgttctctg cgatgacata atatgtgacg  180

atcaagaatt agactgcccc aacccagaaa ttccatttgg agaatgttgt gcagtttgcc  240

cacagcctcc aag                                                      253
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<210>      14
<211>      1749
<212>      DNA
<213>      Homo sapiens
<220>
<221>      1-1749
<222>      unknown

<223>      unsure at all n locations
<400>      14

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cagcgagcca ttctaccttg tatcaagggt tatgatgtga ttgctcaagc ccaatctggg  240

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aaaaaaaaa                                                        1749
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<210>   15
<211>   1232
<212>   DNA
<213>   Homo sapiens

<400>   15

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gagatcttca ccttcgaccc tctcccggag cccgcagcgg cccctgccgg gcgccccagc  180
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gtcttctgcc agatcctgat ggctgaagag ggtgtgccgg cgccctgcc  tccaagagga  360

cgccctaac  gccgcatccc tgggcgccca ccctgtgtc  ccccgtcctc gagccctta  420

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cgtcctccta ggtgatggag atgtgtacgt aatatttatt ttaacttatg caagggtgtg  840

agatgttccc cctgctgtaa atgcaggtct cttggtattt attgagcttt gtgggactgg  900

tggaagcagg acacctggaa ctgcggcaaa gtaggagaag aaatggggag gactcgggtg  960

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<212>      DNA
<213>      Homo sapiens

<400>      16

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ggaagtaagt acgtcaataa ggaaattcaa aatgctgtca acggggtgaa acagataaag  240

actctcatag aaaaaacaaa cgaagagcgc aagacactgc tcagcaacct agaagaagcc  300

aagaagaaga aagaggatgc cctaaatgag accagggaat cagagacaaa gctgaaggag  360

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aaggcgaaga ccagtactat ctgcgggtca ccacggtggc ttcccacact tctgactcgg   1260

acgttccttc cggtgtcact gaggtggtcg tgaagctctt tgactctgat cccatcactg   1320

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<211>     1854
<212>     DNA
<213>     Homo sapiens

<400>     17

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agaaccttca cgcattgatt cttgtcaaca ataaaattag gcaaagttag tcctgggagc    600

atttacacct ttggtgaaag ttggaacgac tttatctgtc caagaatcag ctgaaggaat    660

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tgtcattatt ttgaaaaaat aaatttaaaa atacattcaa aattaaaaaa aaaa   1854

<210>   18
<211>   1585
<212>   DNA
<213>   Homo sapiens

<400>   18

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atcccaagca agcctagagc ttgccatcaa gcagtggggc tctcagtaag gaacttggaa 1380

tgcaagctgg atgcctgggt ctctgggcac agcctggccc ctgtgcaccg agtggccatg 1440

gcatgtgtgg ccctgtctgc ttatccttgg aaggtgacag cgattccctg tgtagctctc 1500

acatgcacag gggcccatgg actcttcagt ctggagggtc ctgggcctcc tgacagcaat 1560

aaataatttc gttggacacg ttaaa                                      1585
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<210>   19
<211>   1390
<212>   DNA
<213>   Homo sapiens

<400>   19

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gatcaccccc aacctggctg agttcgcctt cagcctatac cgccagctgg cacaccagtc  240

caacagcacc aatatcttct tctccccagt gagcatcgct acagcctttg caatgctctc  300

cctgggggac caaggctgac actcacgatg aaatcctgga gggcctgaat ttcaacctca  360

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<213>     Homo sapiens

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gccggtggct agtgggtctg ggtttattgt gtcggaagat ggactgatcg tgacaaatgc   180

ccacgtggtg accaacaagc accgggtcaa agttgagctg aagaacggtg ccacttacga   240

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cacccagcga ggcggcaaag agctggggct ccgcaactca gacatggact acatccagac   480

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<223>     unsure at all n locations
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agggcaacat ctacaagccc aacaacaagg ccatggcaga cgagctgagc gagaagcaag  240

tgtacgacgc gcacaccaag gagatcgacc tggtcaaccg cgaccctaaa cacctcaacg  300

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acatttcaag gatagaagta tacctgattt tttttccttt taattttcct ggtgccaatt  720

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ttcttaaacc ttcagttatg attttttttt catacactta ttggaactct gcttgatttt 2160
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aatgtgctat actgcatact ttttaaatgt aaagatattt ttatctttat atgaagaaaa 2340

tcacttagga aatggctttg tgattcaatc tgtaaactgt gtattccaag acatgtctgt 2400

tctacataga tgcttagtcc ctcatgcaaa tcaattactg gtccaaaaga ttgctgaaat 2460

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<213>   Homo sapiens

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gtgggagccg ttctttggtg gctgaagccc ctctcctgct gctcctcctg caggtcactc   240

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tgggagggag acgcagtaga cagagacaga ccgagaagga agggagagac agaggggggcg   660

cgcgcacagg agcctgactc cgctgggaga gtgcaggagc acgtgctgtt ttttatttgg   720

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<210>   23
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<212>   DNA
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tctgcggcga atcagaagca gcaagcaact ttgactgctg tcttgggata cacagaccgt   180

attcttcatc ctaaatttat tgtgggcttc acacggcagc tggccaatga aggctgtgac   240

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ttaaagttaa actgtatttt atgttattta tagctgtagg ttttctgtgt ttagctattt   600

aatactaatt ttccataagc tattttggtt tagtgcaaag tataaaatta tatttggggg   660

ggaataagat tatatggact ttcttgcaag caacaagcta ttttttaaaa aaaactattt   720

aacattcttt tgtttatatt gttttgtctc ctaaattgtt gtaattgcat tataaaataa   780

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ccaagtgatt ggtgcttctg tgggattctc acttctgtca tctagcatgg ggtcaataca   360

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accattgctc aggattatgg ggtcttaaag gctgatgaag gcatctcgtt caggggcctt   480

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gagaccagcc tttcttcctt tggtaggaat ggcctgagtt ggcgttgtgg gcaggctact   900

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<212>      DNA
<213>      Homo sapiens

<400>      25
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ccaaggctcc tgacctacct ggccctgag ctctggagca agccctgacc aataaaggc 1620

tttgaaccca aaaaaaaaa aa                                          1642
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<210>   26
<211>   163
<212>   DNA
<213>   Homo sapiens

<400>   26

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tcaaagagga caaggaaact atagagctga ttttagaata ttttacaaat acatgccttc  120

cattggaatg ctaagatttt ctactgcttc tggggacggg aaa                    163
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<210>   27
<211>   1746
<212>   DNA

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<213>      Homo sapiens
<220>
<221>      1-1746
<222>      unknown

<223>      unsure at all n locations
<400>      27
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aaaaaa                                                              1746
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<210>      28
<211>      1884
<212>      DNA
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<213>      Homo sapiens

<400>      28

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caatctccgg aggcacgaag ccatccacac gggagccaag gccggccggg tcccctcggg  180

tgctatgaag atgccgacca tggtgcccct gagcctcctg agcgtgcccc agctgagcgg  240

agccggcggg ggaggggggag aggcgggtgc cggcggcggc gctgccgcag tggccgccgg  300

tggcgtggtg accacgaccg cctcggggaa gcgcatccgg aagaaccatg cctgcgagat  360

gtgtggcaag gccttccgcg acgtctacca cctgaaccga cacaagctgt cgcactcgga  420

cgagaagccc taccagtgcc cggtgtgcca gcagcgcttc aagcgcaagg accgcatgag  480

ctaccacgtg cgctcacatg acggcgctgt gcacaagccc tacaactgct cccactgtgg  540

caagagcttc tcccggccgg atcacctcaa cagtcacgtc agacaagtgc actcaacaga  600

acggcccttc aaatgtgaga aatgtgaggc agctttcgcc acgaaggatc ggctgcgggc  660

gcacacagta cgacacgagg agaaagtgcc atgtcacgtg tgtggcaaga tgctgagctc  720

ggcttatatt tcggaccaca tgaaggtgca cagccagggt cctcaccatg tctgtgagct  780

ctgcaacaaa ggtactggtg aggtttgtcc aatggcggcg gcagcggcag cggccgggca  840

gcggcagcag cggcagcagt agcagcccct cccacagctg tgggctccct ctcggggggcg  900

gaggggggtgc ctgtgagctc tcagccactt ccctcccaac cctggtgagc tccaagttgg  960

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ttcaaggatg gaatttttca taactccata tggcttgaac gagcagccgg tgtgtaccac   180

agagaagcac ggtctggcaa atacaagctc acctacggca gaagctaagg cggtgtgtga   240

atttgaaggc ggccatctcg caacttacaa gcagctagag gcagccagaa aaattggatt   300

tcatgtctgt gctgctggat ggatggctaa gggcagagtt ggatacccca ttgtgaagcc   360
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agggcccaac tgtggatttg gaaaaactgg cattattgat tatggaatcc gtctcaatag 420

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aaaaaaaaag gatgatcaaa acacacagtg tttatgttgg aatcttttgg aactcctttg 960

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<213>   Homo sapiens

<400>   45

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caacggggcc tgtgtggcct gccttctgtg atgaccagtc ccctgatgcc tactctgcct 180

atgtcttggc aagcctggct ggggaggaac tgcaagcagt gggagtcttc tcctaaattc 240

aacccaaatg caattggcgt ccctcagccc tatctcaaca agctcaacta ccgtcggacg 300

gaccatgagg atccacgggt taaaaagaca gctttccaga ttagcatggc caagccaag 360

gcccaactca gctgaggaga gcaatgggcc catctatgcc tttgagaacc tccgggcatg 420

tgaagaggca ccacccagtg cagcccactt ccggttctac cagattgagg gggatcgata 480

tgactacaac acagtccccct tcaacgaaga tgaccctatg agctggactg aagactatct 540

ggcatggtgg ccaaagccga tggaattcag ggcctgctat atcaaggtga agattgtggg 600

gccactggaa gtgaatgtgc gatcccgcaa catggggggc actcatcggc ggacagtggg 660

gaagctgtat ggaatccgag atgtgaggag cactcgggac agggaccagc ccaatgtctc 720

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ctgaagatca aataaccaat ataaagcata tttcttggcc ttgctccaca ggacataggc 1680

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<213>   Homo sapiens

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tgaccccaga aattctggcc cagccaatct agaggcaagc ctggcca 167

<210>   47
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tgaacctgat ttgtgtgtgc accgcgtctc cagcgatccc ggatccactg cgctgccagg 180

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ccccagctcc ttggctcgct cagctcctcc accgcagccc agcagtgaga cgcgcgcgca 360

gccagctccc cacgagatgg aacagaccga agtgctgaag ccacggaccc tggctgatct 420

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gtacaggtat acccgaaatc ttgtggatca aggaaatgga aaatttaatc tgatgattct   600

ctgttggggt gaaggacatg gcagcagtat tcatgatcat accaactccc actgctttct   660

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aaatgtagat gtctttagta tactttgtat gttcttaata ttggaagata attttgtgaa  1440

tctgtagatt ttattttttc agtcttacct tacaaatttc ttttctatga ataatagagg  1500

aacttacggc actctgccat ttgttaatga aaggaagtgc agaggattta gaaaagtaca  1560

tgatccccag accacaacaa accaaaacat aaactcatgt ctgtgtccca tggtcatagt  1620

caaagatttt gtactgctaa aattaccaaa taatttaaat aaagtggatt tgaacacaaa  1680

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tgcaatccag cttcccaaga aggctgggga tataacaaac aaagctacaa aagagaagga  180

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<213>      Homo sapiens

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ggtgagactg gtgctgtggg agctcctgga gccctgggc cccctggctc ccctggcccc   180

gctggtccaa ctggcaagca aggagacaga ggagaagctg gtgcacaagg ccccatggga   240

ccctcaggac cagctggag   259

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<212>   DNA
<213>   Homo sapiens

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tcccaggagc atccggcccc attggtcctg gaggtccccc cggcctcccc ggacctgctg   180

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cctgccttct gctggtgacc ttgtcctgcc tggggacttt gggtcaggcc ccgaggcaaa   180

agcaaggaag cactggggag gaattccatt tccagactgg agggagagat tcctgcacta   240

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atatgcagca ggtgacttcc agcctcaagg gcagc   515

<210>   52
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<213>   Homo sapiens

<400>   52

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ccacaacccc ctgaaaagca tcccggacaa tgccttccag tcctttggca gatacctgga   180

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aaccacgctg aaacacgtcc atttggagaa caaccgcttg a   281

<210>   53
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<213>   Homo sapiens

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tgacagagaa ctccgacaaa gttcccattg ccctggtggg acctgatgac gtggaattct 120

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cagtcagcag gccactagtt tattaacttc cagtcacctt gattttgct aaaatgaaga   180

ctctgcagtc tacacttctc ctgttactgc ttgtgcctct gataaagccc aggcaccacc   240

aacccagcag gactcacgca ttatctatga ttatggaaca gataattttg aagaatccat   300

atttagccaa gattatgagg ataaatacct ggatggaaaa aatattaagg aaaaagaaac   360

tgtgataata cccaatgaga aagtcttca attacaaaaa gatgaggcaa taacaccatt   420

acctcccaag aaagaaaatg atgaaatgcc cacgtgtctg ctgtgtgttt gtttaagtgg   480

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acctaactta agaagactcg attttacagg aaatttgata gaagatatag aagatggtac   660

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ctatggcaaa gtctttcaaa tacgagataa ctgcaaaata ttttcctttt atactacaga 1920

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cccagaactg ccactgccac agcgacctgc agcacgtcat ctgcgacaag gtggggctgc 180

agaagatccc caaggtgtca gagaagacca agctgctcaa cctacagcgc aacaacttcc 240

cggtgctggc tgccaattcg ttccgggcca tgccgaacct cgtgtcattg cacctgcagc 300

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<210> 56
<211> 274
<212> DNA
<213> Homo sapiens

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actgactgct tatggaaaag aacagataat gatatccgtc tcctgcttcc acccaccact   180

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<212>   DNA
<213>   Homo sapiens

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cacaaaacta atcattattt aaagttattt ccg   153

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tcccccaaaa aacgaaacaa aacaaaaaaa caacctttttt aagagttgat ggctactcat   180

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gaatcattat ttttttccca aggagaaaac cggggtaaag ggagggaagc aattcaattt   180

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<223>   unsure at all n locations
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gccactaggc tgtgtcccac agtcagtgtc acccagtgaa caggcattac ccccacatct   180

ggaaccagcc tggccccaag ggctacggca taactcagta ccaggtagag ttggccccac   240

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attttactac acctttactt tggaaaactt caaacctgta ctaaaataga atagggcagt   180

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<213>   Homo sapiens

<400>   66

ggaaactcca ggctcctggt ttttccctgg gcggggaaag agaagactga aacatctgtg   60

tgacattcag attttttcaga ggtctgccca agggtctggt ttttattttg cttgaatata   120

agttctgaca ggaaagggca ccaggttgcg gggtcattga aaacaaagtt gacagtttag   180

attagcaggc actcaccatg gtccctcccc ctccctcagc atgaaaacca gcaggagaaa   240

ttc   243

<210>   67
<211>   250
<212>   DNA
<213>   Homo sapiens

<400>   67

gtctgtgtac catcttacct ggaatagaga ttgtgttaaa ttaacagatc atctgactga   60

gaggtttttt tcccccaaaa cagaagcaaa taaacattat tttgttcctt tggtataact   120

ttcattgaac agttatatag tgctttggaa gtatcaagtc ctgtgctaaa taaatgctgg   180

agatacaaaa gcccctgacc tcagaatgtc atagtcttgg ggtaagaaaa aattcattct   240

gtgcccgagg   250

<210>   68
<211>   213
<212>   DNA
<213>   Homo sapiens

<400>   68

caggtgtgaa ccactgcacc tggcccaaaa tctcttgatt gatacagtcc tctttatttt   60

tcaagatcaa gttatgatac ctttaccaac agtcatacat tcttttggaa ctttgcacaa   120

tagtcatatg ttcttttaga actttacact tctattcttt attgccctgt attataattg   180

cttgtatgcc tgactcctct acatgactgt atg   213

<210>   69

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<211>      198
<212>      DNA
<213>      Homo sapiens

<400>      69

cataaaccta ctttatcatc ctctcctaaa gggaaaagag aagatttagc tagaataatt   60

attaacagaa gatgtggaga tacagaagaa actagaaaat atctcacaat caatacatct  120

ttcaagcagt caatcatttg tcactcatat tgcttttta aacccagctt tacatggaag  180

gaataaatgg aactccag                                                 198


<210>      70
<211>      393
<212>      DNA
<213>      Homo sapiens

<400>      70

aaaaaaagga aaaaaaaat tgccttaagt catatagatt gtaccagcag ctctcacagt   60

gtggactttg gacttctagg agtccccagg aacctttag gggatgccta cgaggaggtc  120

caaactgttt tcataagaac gctaaggtgc tatgtgcctt tttaactcat tctctcacga  180

gtgttcagtg gagtttcca gaggctctgt gacatggtga catcactctg ataattagta  240

gaatgtgtgt gtgtgtactt ttgtttcta gaatattgta aattgataga tttagggtat  300

aaatatatgt gttttcagag attaactcag tttgctgcca gtgcttctac tgtgctctta  360

ctggctattt tcatttatac ctgctgctga gtc                                393


<210>      71
<211>      216
<212>      DNA
<213>      Homo sapiens

<400>      71

ctctacttgt atgaccctag gaatagattg gaatactgca gaggaccaaa gctgaggcat   60

gctaaacagc tgcttggagg tggaagcaag ttcagtcacc tactcagctt cctctctcca  120

ccacccagtt cctccctcag tatcacatta tttttttctt ctgcttttca ttaacctaac  180

tcatctcatc agtacaacca ttttcttatt ctctaa                             216


<210>      72
<211>      166
<212>      DNA
<213>      Homo sapiens

<400>      72

caaatattta acagaactaa tggaactatt ttagtatgct ttcccctggg ctggagtgta   60

ggctaagact ttatttaaat acaggatgga tggtgttttg actgaagatg cctccaactt  120

ttgctcttct gttttttatt tgatgtgctc aagcttctaa ttccct                 166


<210>      73
<211>      240
<212>      DNA
<213>      Homo sapiens
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<400>   73

tgataggcag ctaaaactgt tatgcccact gtgctcaatt tgaagcagaa ttcagtgaaa   60

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cagccactgt gcctttttttt ctgtgaagac tcaacggatg tgtgtgtttg tatgtttgtt   180

aacagttaca tatgtttgta tgagtgtata tatatatctg tgtgtgtgta tctctaacgt   240

<210>   74
<211>   291
<212>   DNA
<213>   Homo sapiens

<400>   74

tggacccccca gctgaggagt cctgctcaag acacggtcac tggatctgag aaacttccca   60

ggggaccgca ttccagagtc agtgactctg tgaagcaccc acatctacct cttgccacgt   120

tcccacgggc ttgggggaaa gatggtgggg accaaggcct gggtgttctc cttcctggtc   180

ctggaagtca catctgtgtt ggggagacag acgatgctca cccagtcagt aagaagagtc   240

cagcctggga agaagaaccc cagcatcttt gccaagcctg ccgacaccct g   291

<210>   75
<211>   283
<212>   DNA
<213>   Homo sapiens

<400>   75

ctccgccagc ctccgggaga ggagccgcac ccggccggcc cggccccagc cccatggacc   60

tccgagcagg ggactgcgtg ggggatgtta gcgtgcctgt gcacggtgct ctggcacctc   120

cctgcagtgc cagctctcaa tcgcacaggg gacccagggc ctggcccctc catccagaaa   180

acctatgacc tcacccgcta cctggagcac caactccgca gcttggctgg gacctatctg   240

aactacctgg gcccccccttt caacgagcca gacttcaacc ctc   283

<210>   76
<211>   139
<212>   DNA
<213>   Homo sapiens

<400>   76

ccttcgtgaa gtcgccaaac ctctctgagc cccagtcatt gctagtaaga cctgcctttg   60

agttggtatg atgttcaagt tagataacaa aatgtttata cccattagaa cagagaataa   120

atagaactac atttcttgc   139

<210>   77
<211>   669
<212>   DNA
<213>   Homo sapiens

<400>   77

ctggctggag cagcgagtct gtcgatccca ggccagagac aaggcagaca aaggttcatt   60

tgtaaagaag ctccttccag cacctcctct cttctccttt tgcccaaact cacccagtga   120

```
gtgtgagcat ttaagaagca tcctctgcca agaccaaaag gaaagaagaa aaagggccaa    180

aagccaaaat gaaactgatg gtacttgttt tcaccattgg ggctaacttt gctgctagga    240

gttcaagcca tgcctgcaaa tcgcctctct tgctacagaa agatactaaa agatcacaac    300

tgtcacaacc ttccggaagg agtagctgac ctgacacaga ttgatgtcaa tgtccaggat    360

catttctggg atgggaaggg atgtgagatg atctgttact gcaacttcag cgaattgctc    420

tgctgcccaa aagacgtttt ctttggacca aagatctctt tcgtgattcc ttgcaacaat    480

caatgagaat cttcatgtat tctggagaac accattcctg atttcccaca aactgcacta    540

catcagtata actgcatttc tagtttctat atagtgcaat agagcataga ttctataaat    600

tcttacttgt ctaagacaag taaatctgtg ttaaacaagt agtaataaaa gttaattcaa    660

tctaaaaaa                                                            669
```

```
<210>      78
<211>      486
<212>      DNA
<213>      Homo sapiens

<400>      78
```

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ggacgccatc tctgaggccc aaggccacag tgaaatcaca gaagcaacac agctgggaaa     60

ggactcgatg gaagagctgg gaaaagccaa acccaccacc cgacccacag ccaaacctac    120

ccagcctgga cccaggcccg gagggaatga ggaagcaaag aagaaggcct gggaacattg    180

ttggaaaccc ttccaggccc tgtgcgcctt tctcatcagc ttcttccgag ggtgacaggt    240

gaaagacccc tacagatctg acctctccct gacagacaac catctctttt tatattatgc    300

cgctttcaat ccaacgttct cacactggaa gaagagagtt tctaatcaga tgcaacggcc    360

caaattcttg atctgcagct tctctgaagt ttggaaaaga aaccttcctt tctggagttt    420

gcagagttca gcaatatgat agggaacagg tgctgatggg cccaagagtg acaagcatac    480

acaact                                                               486
```

```
<210>      79
<211>      752
<212>      DNA
<213>      Homo sapiens
<220>
<221>      1-752
<222>      unknown

<223>      unsure at all n locations
<400>      79
```

```
ggggctacga gcccaacgag gatggcacag cctgcgtggg gactctcggc cagtcaccgg     60

gcccccgcnc caccaccccc ancnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn    120

nnnnngccac tgctgcaccg gtcctcgtag atggagatct caatctgggg tcggtggtta    180

aggagagctg caagcccagc tgctgagcag ggggtgggac atgaaccagc ggatggagtc    240

cagcagggga gtgggaaagt gggcttgtgc tgctgcctag acagtaggga tgtaaaggcc    300

tgggagctag accctcccca agcccatcca tgcacattac ttagctaaca attagggaga    360

ctcgtaaggc caggccctgt gctgggcaca tagctgtgat cacagcagac agggtcgctg    420
```

```
ccctgatggc gcttacattc cagtgggtct aatgaccata tcttaggaca cagatgtgcc    480

cagggaggtg gtgtcactgc acaggaagta tgaggacttt agtgtcctga gttcaaatcc    540

tgattcagga actcacaaag ctatgtgacc ttacaccagt cacttaactt gttagccatc    600

cattatcgca tctgcaaaat ggggattaag aatagaatct tggggttagt gtggagatta    660

gattaaatgt atgtaagaca cttggcacaa aacctggnac atagtaaagg ctcaataaaa    720

acaagtgcct ctcactgggc tttgtcaaca cg                                  752
```

```
<210>      80
<211>      552
<212>      DNA
<213>      Homo sapiens
<220>
<221>      1-552
<222>      unknown

<223>      unsure at all n locations
<400>      80
```

```
aaatatattc tcaacatttt cagtgagaat ttcttgtaat ggcacctcaa atnttatact    60

cttaaaaaan aacaataatt tgtgaattac caccaaaagg caatggcagt cctacattta    120

agaatagagc tatgcaaact ctgttaaaaa ctatgaggaa aacttatatt agaactttg    180

atatatacta aaatactgat tatcttaatc acattttccc cagagataaa cattgagaga    240

acgaaagcca aagtgtcatt taagagagat atatatgaaa aagtaacatt aatatataga    300

actttaccat caccagccgt agttgataga aaatattagt ttcagaatta ccctcctta    360

aaaaataaga gactatttgt tttcttttaa tttctatgaa taaaagaaat ttttaaaaac    420

tttaaaattt taaatattag tcaaaatact ttttaagtcc tgagtgctta caggtagttg    480

ttaaaaaaat tttaaggcca ggcatggtgg ctcgctcaca cctataatcc taggatctgg    540

gaggtcgagg ca                                                        552
```

```
<210>      81
<211>      135
<212>      DNA
<213>      Homo sapiens

<400>      81
```

```
ttcactcttc aaatgtttgc ttcctgttcc tgctaccctg aaccctgctg ttgaggggtt    60

ctagtgtcta caagggaacc gctgccacca cgaggaataa cacagtgctc ttacagcctg    120

ttccaagtgt ggctt                                                     135
```

```
<210>      82
<211>      225
<212>      DNA
<213>      Homo sapiens

<400>      82
```

```
ggagaatgtg acatagattt gctggcacat gggtttccta tgagcaaacc ccagaattgg    60

acacacgtat ctggtgctgc attggaatca tccgaaaaaa ccaaggcttg cattgcatat    120

ctatctgctg tctgctgaag gagccctgtc tgtgtgccca aggaagtgac atccttgcca    180
```

50

agggctgtcc ctgttgcagg agatgaagga gccctgtcta tgtgc